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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/635,824      | 08/10/2000  | Bei-Hong Liang       | IP-5551             | 6032             |

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|                      |              |
|----------------------|--------------|
| EXAMINER             |              |
| FERGUSON, LAWRENCE D |              |
| ART UNIT             | PAPER NUMBER |
| 1774                 | 5            |

DATE MAILED: 03/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MFE

**Office Action Summary**

Application No.

09/635,824

Applicant(s)

LIANG ET AL.

Examiner

Lawrence D Ferguson

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 31-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 22-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.                      6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-30, drawn to fibrous composite article, classified in class 428, subclass 292.1.
- II. Claims 31-49, drawn to method of making of making a fibrous composite article, classified in class 156, subclass 93

2. Inventions I and II are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product can be made by forming a mat comprising extruded fibers and binder resin.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with James Zeller on February 1, 2002, a provisional election was made with traverse to prosecute the invention of group I, claims 1-30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 31-49, withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently name inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections – 35 USC § 103(a)***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 9 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al. (U.S. 4,131,664).

8. Flowers discloses a fibrous structure (abstract) with binding agents in the cured fibrous structure (column 2, lines 46-47). Flowers discloses fibers selected having a length and strength along with hemp fibers (column 5, lines 27-39) which is analogous to hemp hurd. Although Flowers does not disclose the specific length of the fibers, length is optimizable. It would have been obvious to one of ordinary skill in the art to optimize the components because discovering the

optimum value is of routine skill in the art. Additionally in column 5, lines 27-30 Flowers teaches to select a length and strength to enable formation of a fibrous network having inherent flexibility which is porous and possesses resiliency. Flowers teaches varying the weight amount of binder (column 8, lines 1-7) Although Flowers does not disclose the binder resin comprising amino resins, amino resins are conventional binding additives in the art. Flowers does not specifically disclose fibrous material comprising vegetable bamboo selected from a specified group, however these components are new within the art are would be expected to act as the vegetable components as pointed out in Flowers. Although the specific gravity is not disclosed by Flowers, the same materials are being used in the reference. Therefore, the specific gravity would be expected to be the same, absent any evidence to the contrary.

### ***Claim Rejections – 35 USC § 103(a)***

9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al. (U.S. 4,131,664) in view of Chow (U.S. 3,927,235).

10. Flowers is relied upon for claims 1-4, 9 and 22-23. Flowers does not disclose fibrous material comprising kenaf. Chow teaches fibrous material (abstract and column 1, lines 51-67) comprising kenaf stalk (column 2, lines 9-10) which is analogous to the kenaf hurd. Chow teaches wood fibers (column 1, line 59). Flowers and Chow are analogous art because they are from the same field of fibrous material. It would have

been obvious to one of ordinary skill in the art to include the kenaf material in the fibrous composite article of Flowers because Chow teaches the material is conventional to the art.

***Claim Rejections – 35 USC § 103(a)***

11. Claims 18-21 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al. (U.S. 4,131,664) in view of Chow (U.S. 3,927,235) further in view of Turner (U.S. 5,871,614).

12. Flowers in view of Chow are relied upon for claims 1-2, 4, 9, 13 and 22-23. The references do not teach specific species of wood or cleavage. Turner discloses fibrous material (column 2, line 67) containing a species of wood such as aspen, birch, fir, maple and oak and cleavage (column 3, lines 5-46). Although the reference does not specifically disclose the range of cleavage, cleavage is optimizable. It would have been obvious to one of ordinary skill in the art to optimize the components because discovering the optimum or workable range is of routine skill in the art. The weight ratio would have been expected to be the same of the kenaf to wood species because references contain the same material as applicants, absent any evidence to the contrary. All of the references are analogous because they are all from the field of fibrous material. It would have been obvious to one of ordinary skill in the art to include the species of wood and cleavage in the fibrous article of Flowers because Turner teaches they increase the durability of the fibrous material.

***Claim Rejections – 35 USC § 103(a)***

13. Claims 5-8, 10-12, 14-17, 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flowers et al. (U.S. 4,131,664) in view of Chow (U.S. 3,927,235) further in view of Riebel et al. (U.S. 5,635,123).

14. Flowers in view of Chow are relied upon for claims 1-2, 4, 9, 13 and 22-23. The reference do not teach specific gravity, moisture content, sizing agent, smoothness or internal bond strength. Riebel teaches fibrous material (abstract) with a moisture content (column 1, line 54). Riebel teaches a sizing agent (column 3, lines 26-34) with internal bond strength (column 6, lines 6-7). Riebel teaches specific gravity and smooth material of the fibrous material (column 7, lines 28-29). Although the reference does not explicitly teach the amount of specific gravity, moisture content, sizing agent, smoothness or internal bond strength, these components of the invention would be expected to be the same because the references include the same components as applicant, absent any evidence to the contrary. All of the references are analogous because they are all from the field of fibrous material. It would have been obvious to one of ordinary skill in the art to include the specific gravity, moisture content, sizing agent, smoothness and internal bond strength to the fibrous article of Flowers because Riebel teaches these components are well known and used within the art.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is (703) 305-9978. The examiner can normally be reached on Monday through Friday 8:30 AM – 4:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. Please allow the examiner twenty-four hours to return your call.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.

ZDF

Lawrence D. Ferguson  
Examiner  
Art Unit 1774

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
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Cynthia H. Kelly